

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/EP 03/04899

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 C01B17/04 B01D53/86

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 C01B B01D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 628 977 A (HEISEL MICHAEL ET AL) 13 May 1997 (1997-05-13) column 6, line 35-49; figure 2 ---	1-6
X	EP 0 672 618 A (LINDE AG) 20 September 1995 (1995-09-20) column 6, line 54-58 column 8, line 18-49; figure ---	1-6
A	WO 01 30692 A (MONSANTO CO) 3 May 2001 (2001-05-03) the whole document ---	1-6
A	GB 769 995 A (GAS COUNCIL) 13 March 1957 (1957-03-13) page 7; figure ---	1-6

	---/---	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (see specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

Date of the actual completion of the international search

10 September 2003

Date of mailing of the international search report

25/09/2003

Name and mailing address of the ISA
 European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl.
 Fax: (+31-70) 340-3016

Authorized officer

Gruber, M

INTERNATIONAL SEARCH REPORT

International Application No
/EP 03/04899

C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 38 43 295 A (KRUPP KOPPERS GMBH) 28 June 1990 (1990-06-28) column 3, line 8-15 _____	1

INTERNATIONAL SEARCH REPORT

International Application No.

/EP 03/04899

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5628977	A	13-05-1997	DE 4239811 A1	01-06-1994
			DE 59302392 D1	30-05-1996
			WO 9412430 A1	09-06-1994
			EP 0670811 A1	13-09-1995
EP 0672618	A	20-09-1995	DE 4409203 A1	21-09-1995
			AT 167653 T	15-07-1998
			CA 2144893 A1	18-09-1995
			DE 59502626 D1	30-07-1998
			EP 0672618 A1	20-09-1995
			US 5676921 A	14-10-1997
WO 0130692	A	03-05-2001	AU 8030100 A	08-05-2001
			BR 0014908 A	11-06-2002
			CA 2386336 A1	03-05-2001
			CN 1382105 T	27-11-2002
			EP 1230149 A2	14-08-2002
			JP 2003512285 T	02-04-2003
			WO 0130692 A2	03-05-2001
GB 769995	A	13-03-1957	NONE	
DE 3843295	A	28-06-1990	DE 3843295 A1	28-06-1990
			CN 1043681 A , B	11-07-1990
			DD 290404 A5	29-05-1991
			DE 3919908 A1	20-12-1990
			ES 2017241 A6	01-01-1991
			PL 163291 B1	31-03-1994
			US 5100640 A	31-03-1992
			ZA 8908261 A	26-09-1990